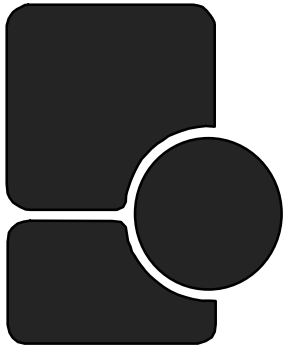
Joint Legislative Audit and Review Commission
of the Virginia General Assembly



Review of Information Technology Systems Development

JLARC Staff Briefing
December 16, 2002

Introduction

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Presentation Outline

- ☑ **Introduction and Summary of Findings**
- ☐ **Background**
- ☐ **Elements for Successful Project Development**
- ☐ **Improving Virginia's Information Systems Development Process**

Study Mandate

- In November 2000, the Joint Legislative Audit and Review Commission directed the review of information technology systems development and procurement by State agencies

- The review was directed as a result of concerns about recent problems with the procurement and development of automated systems and the apparent waste of State funds on systems never completed or deployed

Study Issues

- What factors have contributed to the recent system development successes and failures in State agencies?
- Does the State have adequate systems development standards and procedures to guide agencies, and are those standards enforced?
- Do agencies have adequate staffing, funding, and expertise to support systems development activities?

Study Issues
(continued)

- Does the technology secretariat adequately support agency systems development efforts?
- Is there sufficient technical assistance to and appropriate oversight of agencies?
- Is there accountability for systems development projects?
- Are there best practices in other states or the private sector that the State could adopt to improve systems development?

Research Activities

- Structured interviews with current and previous Secretary of Technology, the directors of the Departments of Technology Planning and Information Technology, state agency and local government ClOs, agency project managers, and private sector vendors

- Case studies of 15 major information systems projects that have been recently completed, terminated, or are still ongoing. These case studies included interviews and document reviews

Research Activities
(continued)

- Survey of State agencies
- Review of other states
- Literature and document review
- Attendance of meetings

Summary of Findings

- An adequate business case is not developed for most projects
- Executive leadership is sometimes inappropriate
- Nine major elements impact project success: (1) identification of needs and requirements, (2) proven technical feasibility, (3) organizational and business process analysis, (4) adequate vendor and product selection, (5) a strong legal contract, (6) project management, (7) end-user involvement, (8) oversight, and (9) reliable funding

Summary of Findings
(continued)

- A review of 15 major IT systems projects indicates that the development record of the State has been mixed
- While some projects have been successful, the State has wasted at least $75 million on failed efforts and has experienced another $28 million in cost overruns
- Development of statewide or multi-agency systems presents unique challenges
- The failure to develop an adequate business case, inappropriate leadership, the frequent absence of the nine elements, and the costs associated with poor management of major projects indicate that there is a compelling need for a greater central role in the systems development process

Summary of Findings
(continued)

- **While the Secretary of Technology and Department of Technology Planning have recently taken steps that may improve the project approval and oversight process, there remain inadequacies with the approval and oversight, support, and planning for systems development**

- **Given the importance of IT in meeting the State's business objectives and the State's mixed success with systems development, the process for central approval and oversight of systems development needs to be strengthened through the establishment of an IT investment board, a full-time CIO, project management specialists, and the increased use of oversight committees**

Summary of Findings
(continued)

- A new funding structure needs to be developed to support information systems development
- Central support provided to agencies needs to be strengthened
- Strategic planning for systems development should be improved, and include an effective process for identifying and prioritizing major information systems needs and projects

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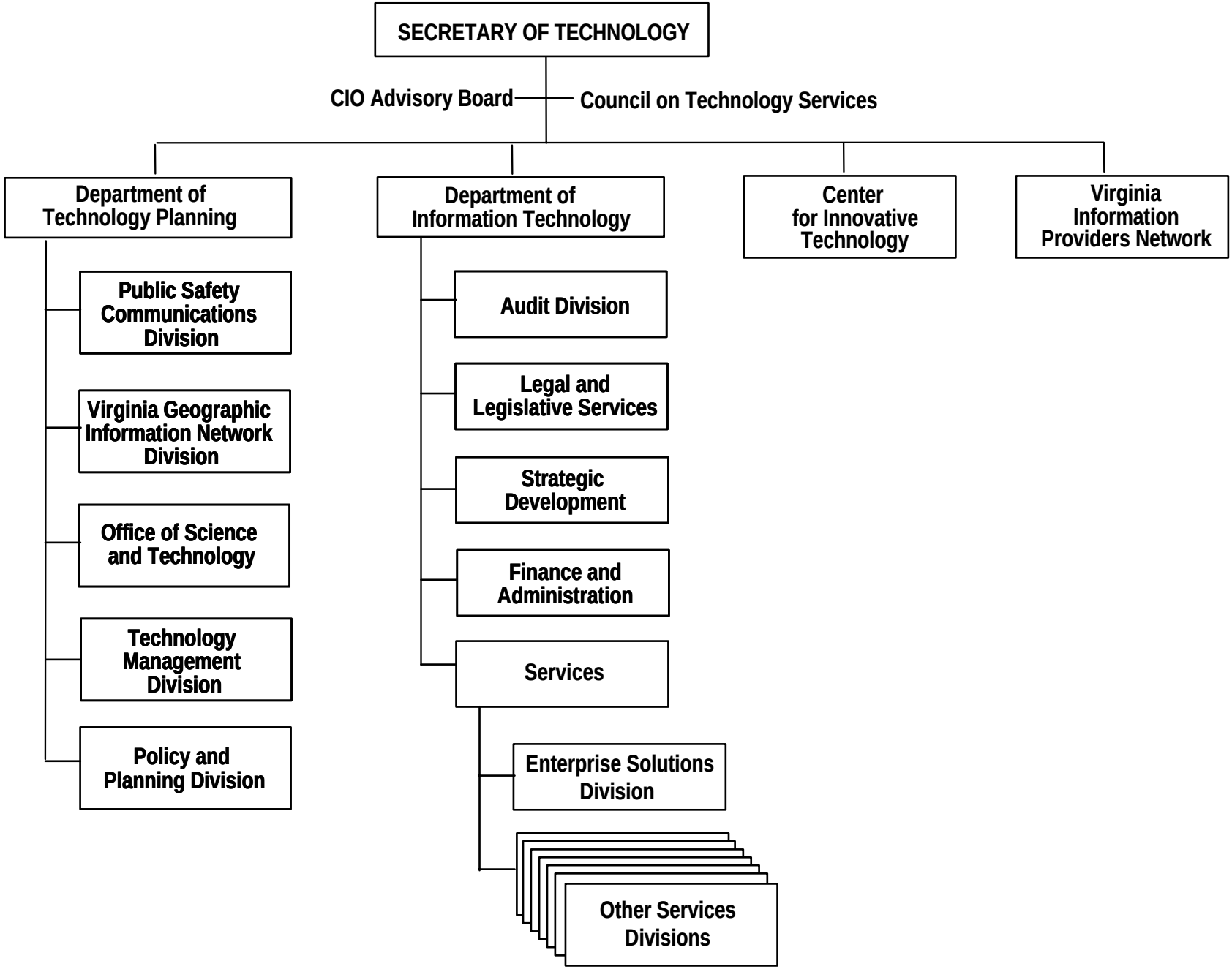
Evolution of Central Support for Systems Development

- As early as 1973, Virginia had a systems development branch. When DIT was created in 1984, the systems development branch became a division within DIT
- In the 1980s, this division had more than 100 employees and was responsible for developing some major State IT systems, but its role and responsibilities declined over time with less revenue available for multi-agency projects and greater emphasis on use of private vendors
- In 1987 the Council on Information Management was created to provide a technology planning process
- In 1998 the office of the Secretary of Technology was established, and in 1999 the Department of Technology Planning was established to replace CIM

Current Organization of the Technology Secretariat



Code Gives Secretary of Technology Multiple Roles

- Secretary of Technology has responsibility for two agencies within the technology secretariat as well as several authorities and boards
- The Secretary is designated as the chief information officer for the State
- The Secretary is also directed to lead economic development in the area of technology

Responsibilities of the Department of Technology Planning

- Developing policies, standards and guidelines for managing information technology in Virginia
- Developing an approval process for IT procurements to ensure they are consistent with agency information technology plans
- Developing a four-year plan for information technology
- Planning and forecasting future needs for information technology

Roles of DIT, COTS, and JCOTS

- **Department of Information Technology (DIT) is responsible for providing data processing services, managing the State's telecommunications contracts, and maintaining some applications for customer agencies**
- **Council on Technology Services (COTS) provides guidance and assistance to the Secretary of Technology in the development of statewide information technology policies**
- **The Joint Commission on Technology and Science (JCOTS) is a permanent legislative commission with responsibility for studying and promoting all aspects of science and technology**

Purposes of IT Projects

- Replace aging or outdated systems, often referred to as legacy systems
- Take advantage of technological advances, provide new or improved services to citizens, or improve the efficiency of business processes
- Increase access to existing information and facilitate the sharing of information through the development of integrated databases or similar systems

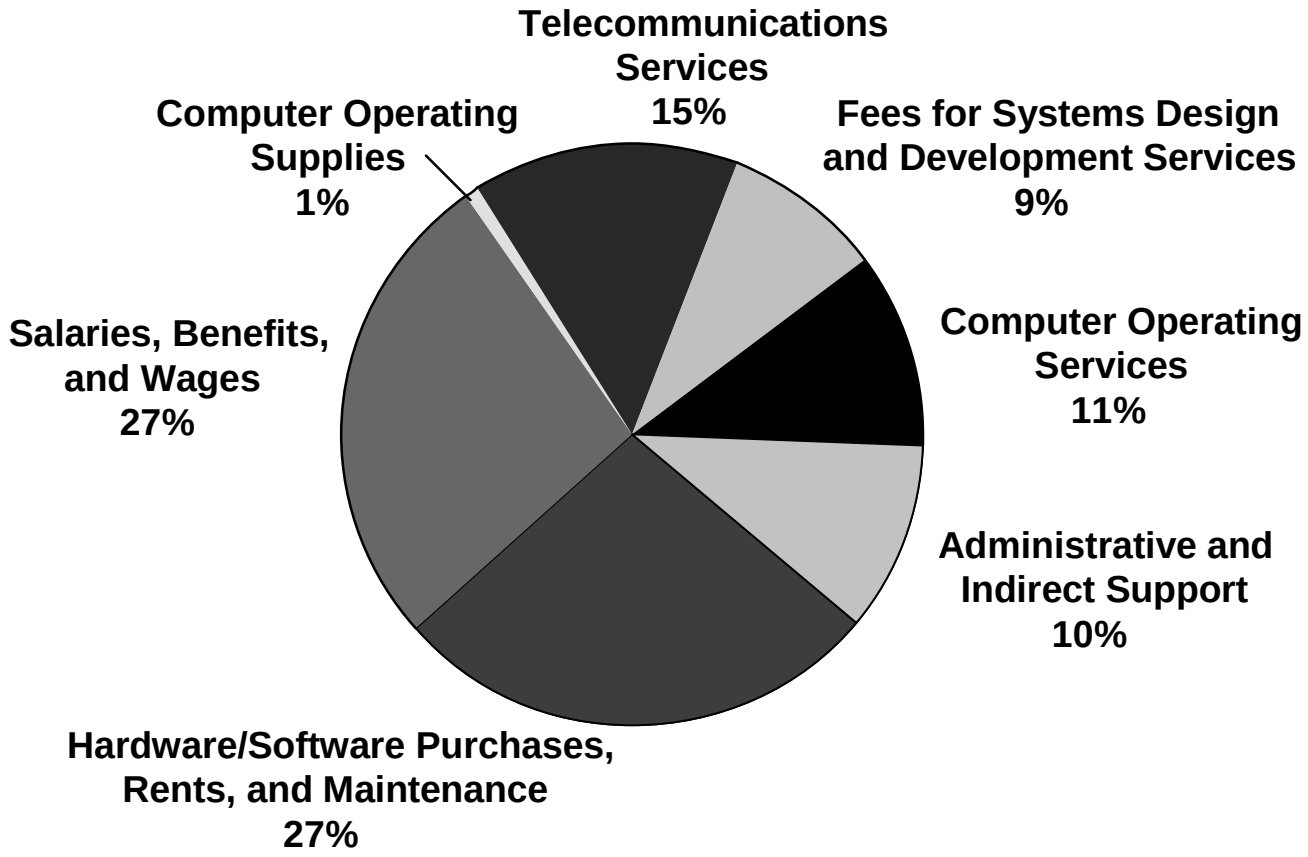
Project Life-Cycle Phases

- **Planning: identifying agency business needs, defining requirements, and assessing feasibility**
- **Procurement: acquisition of hardware, software, and consultant services**
- **Development and implementation: design, development and implementation of software applications**
- **Evaluation: assessment of deliverables and benefits received**

Models for Systems Development

- Customized system
- Commercial off-the-shelf system
- Public-private benefits funding partnership
- Turnkey approach
- Technology transfer
- Internal development

State IT Expenditures by Major Category
FY 2002



Total = $931 million

Note: Administrative and indirect support costs, and a small portion of the salary and wage costs, are based on FY 2001 estimates.

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Cancelled Projects Reviewed

ARIA — Accurate and Reliable Information Access
The College of William and Mary
Actual Cost $5.7 million

ICIS — Integrated Correctional Information System
Department of Corrections
Actual Cost $4.9 million

IDMS — Integrated Document Management System
Department of Transportation
Actual Cost $45.8 million

IHRIS — Integrated Human Resource Information System
Departments of Accounts, and Human Resource Management
Actual Cost $9.25 million

VVRS2 — Virginia Voter Registration System
State Board of Elections
Actual Cost $2.9 million

Completed Projects Reviewed

CEDS — Comprehensive Environmental Data System
Department of Environmental Quality
Actual Cost $13.3 million

ICAS — Inventory and Condition Assessment System
Department of Transportation
Actual Cost $21.4 million (Partially Completed)

MIPS — Management of Inventory and Product Sales
Department of Alcoholic Beverage Control
Actual Cost $18.3 million

S2K — Service 2000
Department of Motor Vehicles
Actual Cost $25.6 million

VISION — Virginia Information System Integrated Online Network
Department of Health
Actual Cost $6.6 million (scheduled for replacement)

Ongoing Projects Reviewed

EVA — **Electronic Procurement**
Department of General Services
Projected Cost $22.8 million

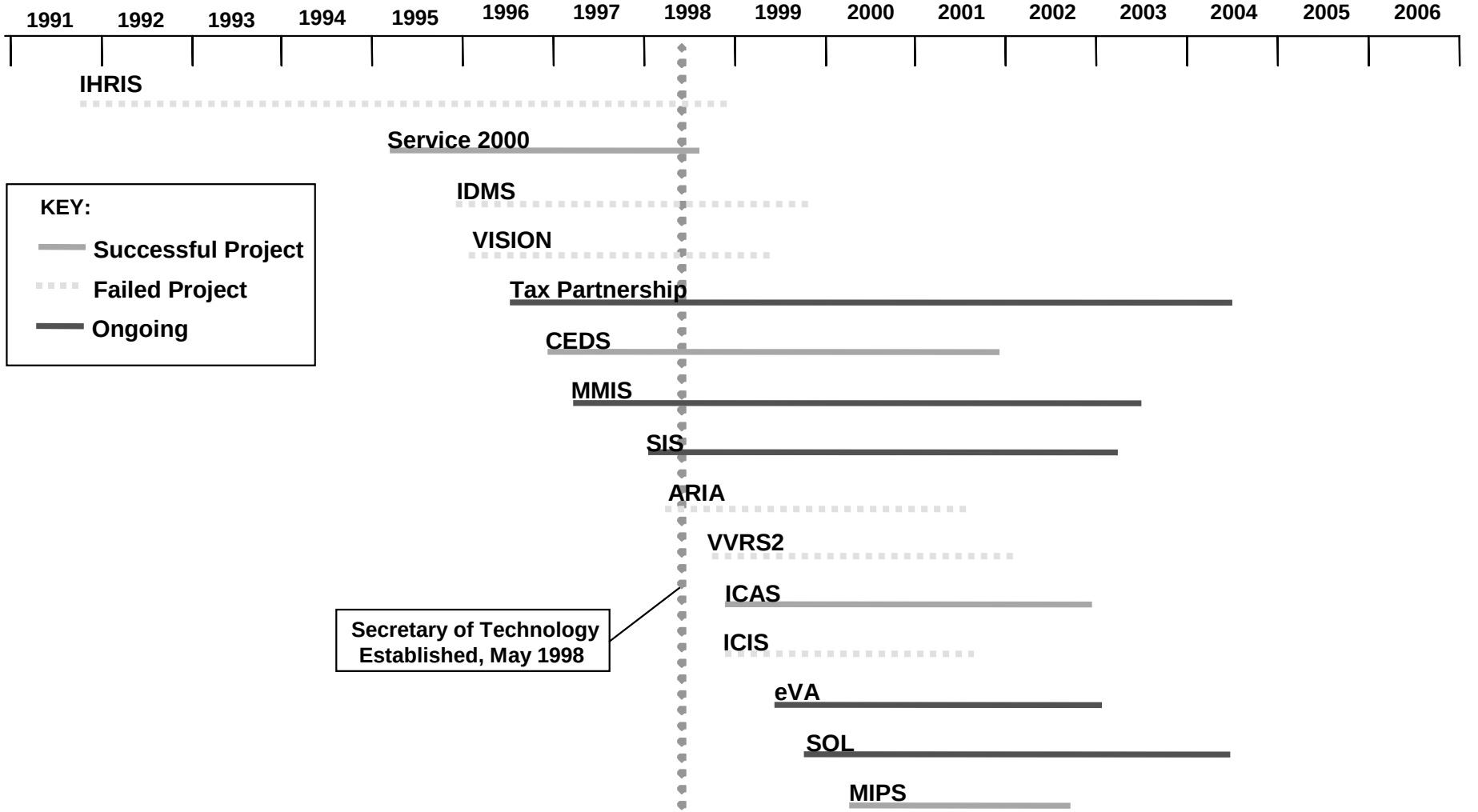
MMIS — **Medicaid Management Information System**
Department of Medical Assistance Services
Projected Cost $60.6 million

SIS — **Student Information System**
Virginia Community College System
Projected Cost $18.5 million

SOL — **Standards of Learning Technology Initiative**
Department of Education
Projected Cost $403 million

TPP — **Tax Partnership Project**
Department of Taxation
Projected Cost $214 million

Timeline for Development of Reviewed Projects



Adequate Business Case Is Often Not Developed

- Development of the business case is a critical first step in development of IT systems
- Despite the large amount of funds invested in major IT projects, most projects reviewed did not involve the development of an adequate business case
- Reasons cited for not fully developing the business case include the associated expense, the difficulty in quantifying costs and benefits, and claims that the need for the system is self-evident

Executive Leadership Is Sometimes Inappropriate

- Extent to which appropriate leadership is exercised can significantly affect the success or failure of IT projects
- Leaders must address external factors that impact projects, ensure adequate financial and personnel resources are provided, and lead agencies through the cultural change
- An example of a project with effective leadership is the Tax Partnership project, and an example of a project with inappropriate leadership was the VVRS2 project

Nine Elements Identified as Critical to Project Success

Element	Description
Identification of Functional Needs and System Requirements	**Agency functional needs are identified and prioritized, as are automated solutions to meet those needs. Specific functional and technical requirements are also defined**
Proven Technical Feasibility	**Technical feasibility of solution is determined through prior successful implementation in a similar organization, or through demonstrated proof of concept**
Organizational and Business Process Analysis	**Prior to system procurement, analysis is conducted of agency structure and business processes to improve the effectiveness of IT solution. Upon procurement, business process reengineering is performed to minimize software customization**
Adequate Vendor and Product Evaluation and Selection	**Procurement process is competitive and unbiased, and background research on vendors and their products is conducted. "No-build" option is fully considered, as is the option to build the system in-house.**
Strong Legal Contract	**Contract minimizes financial exposure by specifying deliverables, linking payments to deliverables, and providing for modular development of the system.**

Nine Elements Identified as Critical to Project Success (continued)

Effective Project Management	**Project is led by an experienced, full-time project management team. Team includes functional area leaders as well as professional IT staff. Systems development standards are utilized and effective technical change control process and contract administration are established**
Involvement of End Users	**Agency staff who will actually use the system are extensively involved in planning and development of the system**
Effective Project Oversight and Control	**Internal oversight structure is established consisting of executive level personnel within the agency, to address major issues that may affect a project's scope, schedule, or budget. External Oversight structure is established to ensure agency has effective project management and oversight processes and to address major issues that arise. Also, independent review is provided to monitor the project and provide guidance**
Reliable Funding	**Funding sources are identified and secured to allow for effective planning and development of the system.**

Presence of Elements that Contribute to Project Success

	Present ✔	Partially Present ✔	Absent ✗
Identification of Functional Needs and System Requirements	✔✔✔✔✔	✔✔✔✔✔✔✔✔	✗ ✗
Proven Technical Feasibility	✔✔✔✔	✔✔✔✔	✗ ✗ ✗ ✗ ✗ ✗ ✗
Organizational and Business Process Analysis	✔✔✔	✔✔✔✔✔✔✔✔	✗ ✗ ✗
Adequate Vendor and Product Evaluation and Selection	✔✔✔✔✔✔	✔✔✔✔	✗ ✗ ✗ ✗ ✗

Presence of Elements that Contribute to Project Success (continued)

	Present ✔	Partially Present ✔	Absent ✗
Strong Legal Contract	✔✔✔✔✔	✔✔✔	✗✗✗
Effective Project Management	✔✔✔✔	✔✔✔✔✔	✗✗✗✗✗
Involvement of End-Users	✔✔✔✔✔✔✔✔✔✔	✔✔✔✔	✗
Effective Project Oversight and Control	✔✔✔✔	✔✔✔✔	✗✗✗✗✗✗✗
Reliable Funding	✔✔✔✔✔✔✔✔	✔✔✔	✗✗✗✗

Presence of Elements that Contribute to Project Success

KEY: ● Present ● Partially Present ● Absent

Agency	ABC	DMV	VCCS	TAX	DOE	DEQ	VDOT	DGS	DOC	DMAS	SBE	W&M	DOH	DOA/DHRM	VDOT
System	MIPS	S2K	SIS	TPP	SOL	CEDS	ICAS	EVA	ICIS	MMIS	VVRS2	ARIA	VISION	IHRIS	IDMS
Identification of Functional Needs and System Requirements	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Proven Technical Feasibility	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Organizational and Business Process Analysis	●	●	●	●	N/A	●	●	●	●	●	●	●	●	●	●
Adequate Vendor and Product Selection	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Strong Legal Contract	●	●	●	●	●	N/A	●	●	N/A	●	N/A	●	●	N/A	●
Effective Project Management	●	●	●	●	●	●	●	●	N/A	●	●	●	●	●	●
Involvement of End-Users	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Effective Project Oversight and Control	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Reliable Funding	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Statewide Enterprise Systems Present Unique Challenges

- IHRIS and eVA projects illustrate unique challenges with statewide or multi-agency systems
- Absence of State technology standards has hindered enterprise-wide development
- Agency autonomy and lack of coordination between central and line agencies has hindered project success
- Funding for enterprise systems has been inadequate

Absence of Key Factors Has Led to Failed Efforts and Wasted Funds

- **The failure to develop an adequate business case, inappropriate leadership, the inconsistent presence of the nine management elements, and challenges associated with developing multi-agency systems has led to substantial State funds being expended on failed projects or projects that have not met many of their intended goals**

- **The loss of at least $75 million on failed projects and $28 million in cost overruns, as well as the continued need for these systems, demonstrates the need for significant changes to the systems development process in the Commonwealth**

Presentation Outline

- ☐ Introduction and Summary of Findings
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- ☑ **Improving Virginia's Information Systems Development Process**

Approval of IT Projects Has Been Limited

- Review of IT projects has been limited to a review and approval of all technology procurements of $100,000 or more
- In the past, this review and approval has been limited to whether a procurement request is consistent with an agency's strategic plan
- There was no evaluation of the overall project objectives, project plan, or technical feasibility
- Procurements were considered individually without any assessment of whether a procurement was part of a larger project

Approval of IT Projects Has Been Limited (continued)

- Current Secretary took steps in April to improve procurement review process
  - more extensive review prior to approval
  - determination of whether a procurement request is part of a larger project
- Significant problems still remain
  - no preliminary approval to proceed with planning
  - lack of review of RFPs or contracts
  - approval authority resides with Secretary of Technology who by himself does not represent all of the State's business interests
  - approval process does not address projects being built in-house

Oversight During Project Development Has Been Limited

- No process for the establishment of committees to review projects prior to 2001
- Prior to 2001, oversight committees were established by the Appropriations Act for three projects, but all three projects failed
- Beginning in 2001 there is a more systematic oversight for projects of $1 million or more
- DTP has also instituted the dashboard to monitor project progress and improve ongoing oversight of projects

Oversight During Project Development Has Been Limited (continued)

- While steps taken may improve oversight, process does not appear to provide the level of ongoing oversight and reliable reporting that needs to occur
- Oversight committees for some projects meet infrequently, and one agency CIO who has participated in the process stated that the committee only focused "on preventing any critical failures that were going to be in the paper"
- Value of the dashboard may be limited because it relies on self-reporting

State Support for Systems Development Has Been Minimal

- Direct assistance to agencies has been limited
- State standards for project development are outdated, and a formal project management methodology does not exist
- No project management training requirements, and no program to train project managers
- Absence of available information regarding State systems development experiences
- Lack of access to specialized legal advice

Statewide Planning for IT Development Has Been Inadequate

- There does not appear to be any significant prioritization or coordination of technology investments across State government
- The State has lacked a formal structure for evaluating the need for statewide or other multi-agency systems from a statewide perspective
- Projects appear to have been developed in isolation without any consideration of whether there are opportunities to leverage buying power or avoid duplicative development efforts

Key Elements of Proposed New IT Development Process

- Information Technology Investment Board should be established
- Full-time, independent Chief Information Officer and project management specialist positions need to be established
- Strengthened project oversight committees should be required
- New project approval and oversight process needs to be established

Information Technology Investment Board Should Be Established

- An Information Technology Investment Board should be established to improve central approval and oversight of major IT projects, provide a structure for prioritizing projects for investment, and provide greater accountability for IT development

- This board could be chaired by the Secretary of Technology and comprised of the following:
  - Each cabinet secretary
  - At least three members of the General Assembly, including the Chair of the Joint Commission on Technology and Science
  - At least four other citizen representatives with technology experience appointed by the Governor
  - The State Treasurer and Auditor of Public Accounts

Recommendation

- **The Governor and the Secretary of Technology should present to the General Assembly for its consideration a plan to create an Information Technology Investment Board with the authority to approve or reject any proposed information systems project with an estimated cost in excess of one million dollars, or other projects of statewide significance, and to terminate any such project after approval. Such a board could be composed of each cabinet secretary; at least three members of the General Assembly, including the Chair of the Joint Commission on Technology and Science; at least four citizen members with technology expertise appointed by the Governor; the State Treasurer; and the State's Auditor of Public Accounts.**

Full-time CIO Position Needs to Be Established

- Currently, the State does not have a full-time CIO position that is effectively insulated from the the political process
  - The Secretary of Technology serves as the State CIO, but also has other major statutory duties including the promotion of technology-based economic development
- A full-time CIO position with ultimate responsibility for the planning and development of information systems needs to be established
- This position would lead the project approval and oversight process, direct central support provided for systems development, and play a key role in statewide strategic planning

Full-time CIO Position Needs to Be Established (continued)

- Position would require a highly qualified individual with substantial experience in information systems development
- CIO could be insulated from external influences by:
  - Using a contractual employment model similar to that used by the VRS to employ a chief investment officer
  - Giving the investment board the authority to hire and remove the CIO for failure to meet contract terms
  - Setting the contract for a set term such as three years not concurrent with the term of the governor

Recommendation

- **The General Assembly may wish to consider amending the *Code of Virginia* to focus the responsibilities of the Secretary of Technology on statewide planning, policy development, and promoting technology-based economic development, and eliminate the position's responsibility as Chief Information Officer.**

Recommendation

- **The General Assembly may wish to consider amending the *Code of Virginia* to provide for the creation of a State Chief Information Officer and project management specialist positions with responsibility for oversight, support, and planning of information systems development across all agencies. The General Assembly may further wish to require that the Chief Information Officer be employed by the proposed Information Technology Investment Board under a special contract for a set term that is not concurrent with the term of the Governor.**

Project Management Specialist Positions Need to Be Established

- Specialists, who would need to be strongly qualified, could report to the CIO and provide assistance in the approval and oversight process, and could provide additional support to agencies
- Specialists would be a key component of the proposed process because they would have the day-to-day responsibility for monitoring and supporting projects, and would provide the link between the agencies, the CIO and investment board
- This structure would be similar to the concept used by DPB and DGS in which staff are assigned to oversee and support groups of agencies

Strengthened Project Oversight Committees Should Be Required

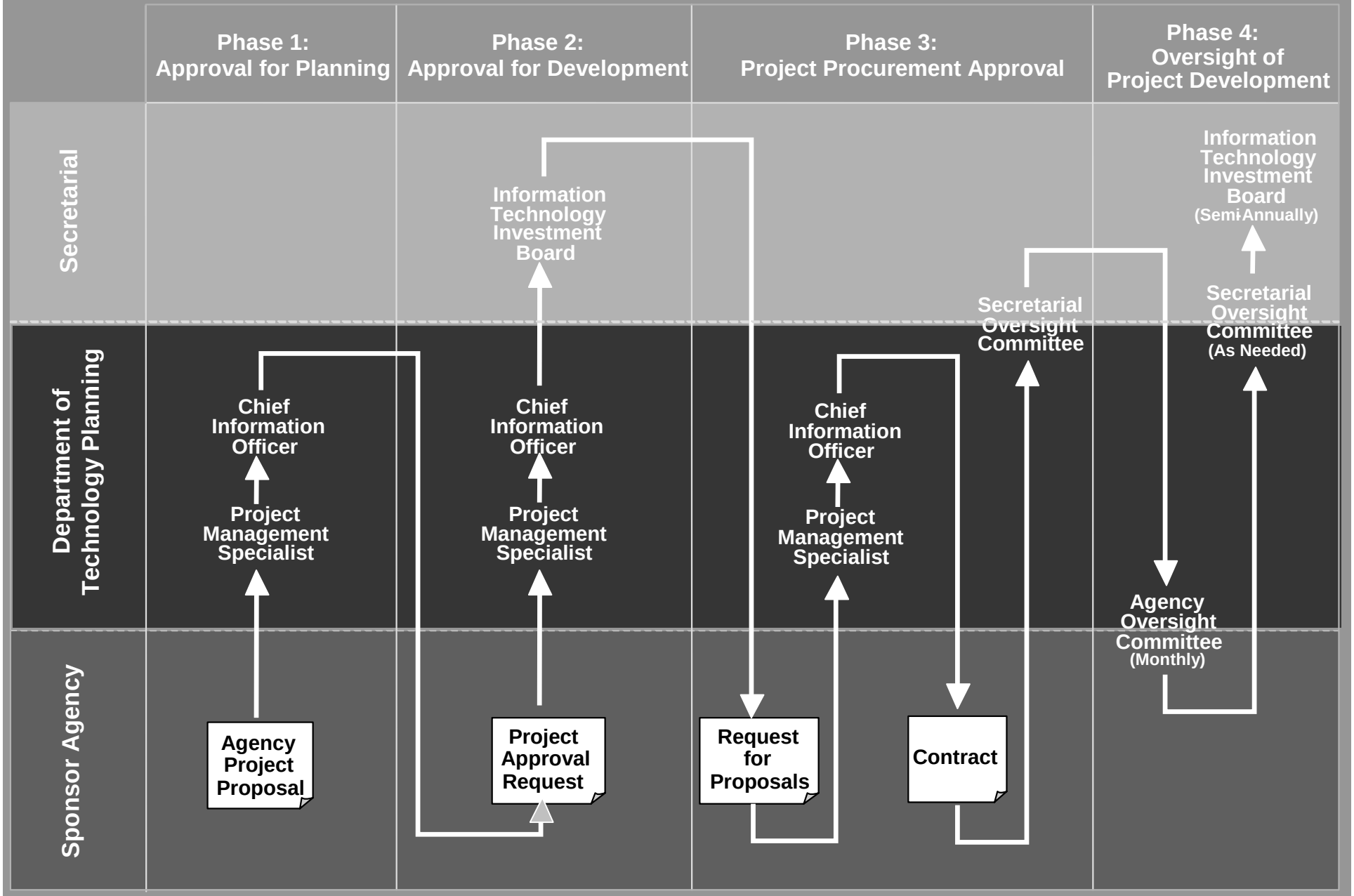
- Formal internal oversight committees comprised of agency business area representatives and executive level leaders should be established for each project with an estimated value in excess of $1 million

- External oversight committees consisting of agency executives, the Secretary of the sponsoring agency, and the State CIO should continue to be used

Recommendation

- **The General Assembly may wish to consider amending the *Code of Virginia* to require agencies to establish internal oversight committees comprised of agency executives and external oversight committees comprised of the Chief Information Officer, a representative from the proponent secretariat, and a representative of the Department of Planning and Budget, which shall be required to provide ongoing oversight of information systems projects that are estimated to cost in excess of one million dollars.**

Proposed Systems Approval and Oversight Process



With Proposed Process, IT Development Would Be Strengthened

- The proposed process would have the following strengths:
  - Would require agencies to fully develop the business case for projects
  - Would better ensure that planning, procurement, and oversight were conducted adequately
  - Increase visibility and accountability for systems development
- Varying levels of oversight and support could be provided to agencies based on demonstrated expertise with systems development

Recommendations

- **The report includes the following recommendations for the General Assembly to consider:**
  - **Requiring that all proposed IT projects over $1 million, or of statewide significance, be approved for planning by the proposed CIO, and approved for development by the proposed investment board**
  - **Requiring that the proposed CIO be required to review and approve all RFPs over $1 million and that external oversight committees be required to approve all contracts in excess of $1 million**
  - **Requiring that internal and external committees be established to provide ongoing oversight**

Funding for Information Systems Projects Has Been Varied

- Special fund agencies such as DMV and ABC have been able to fund projects through their agency budgets
- Agencies such as DMAS have funded projects primarily with federal dollars
- Other agencies such as Health have funded projects at least partially through agency operating funds
- General fund agencies such as the State Board of Elections have funded projects through general fund appropriations
- Agencies such as Tax and DGS have funded projects using a benefits funding model

Lack of Funding for Some Projects

- There has been a general lack of funding to pay for major statewide or multi-agency projects
  - Central administrative systems, including the Commonwealth Accounting and Reporting System (CARS) and the Program Budgeting System (PROBUD) are both more than 20 years old and need to be replaced
  - Lack of sufficient funding hindered the development of IHRIS and eVA
- Several general fund agencies have had difficulty obtaining funds to develop major systems

Current Funding Structure Is Not Adequate

- Current funding structure is linked to the biennium, and there is no mechanism for long-term funding of multi-year projects
- Funding high cost IT projects through the State's operating budget is difficult
- There is no formalized structure to consider the State's IT needs and priorities in making funding decisions about IT systems

New Funding Structure Is Needed to Support Systems Development

- Similar to a capital model, bonds or other debt instruments could provide an additional source for financing major IT projects
  - Existing structure used to issue bonds to fund buildings could be used to fund major IT projects
- Requests for bond funding would need to be prioritized by the Information Technology Investment Board and the prioritized list submitted as part of the Governor's budget submission for the biennium
- Projects could then be evaluated and authorized for funding by the General Assembly

Recommendation

- **The General Assembly may wish to consider amending the *Code of Virginia* to establish a funding process for information technology projects. The process may involve the use of bonds or other debt instruments issued for the development of information systems through the Public Building Authority. The Information Technology Investment Board, recommended in this report, should be required to submit a list of recommended projects for funding annually to the General Assembly for its review and approval.**

Office of Project Management Would Strengthen Support for IT Development

- The current division of technology management in Department of Technology Planning could become the Office of Project Management, and the existing positions in the division could be refocused on project management
- Project management specialists could be housed within the Office of Project Management
- The existing functions of the DIT enterprise solutions division should be relocated within the Office of Project Management

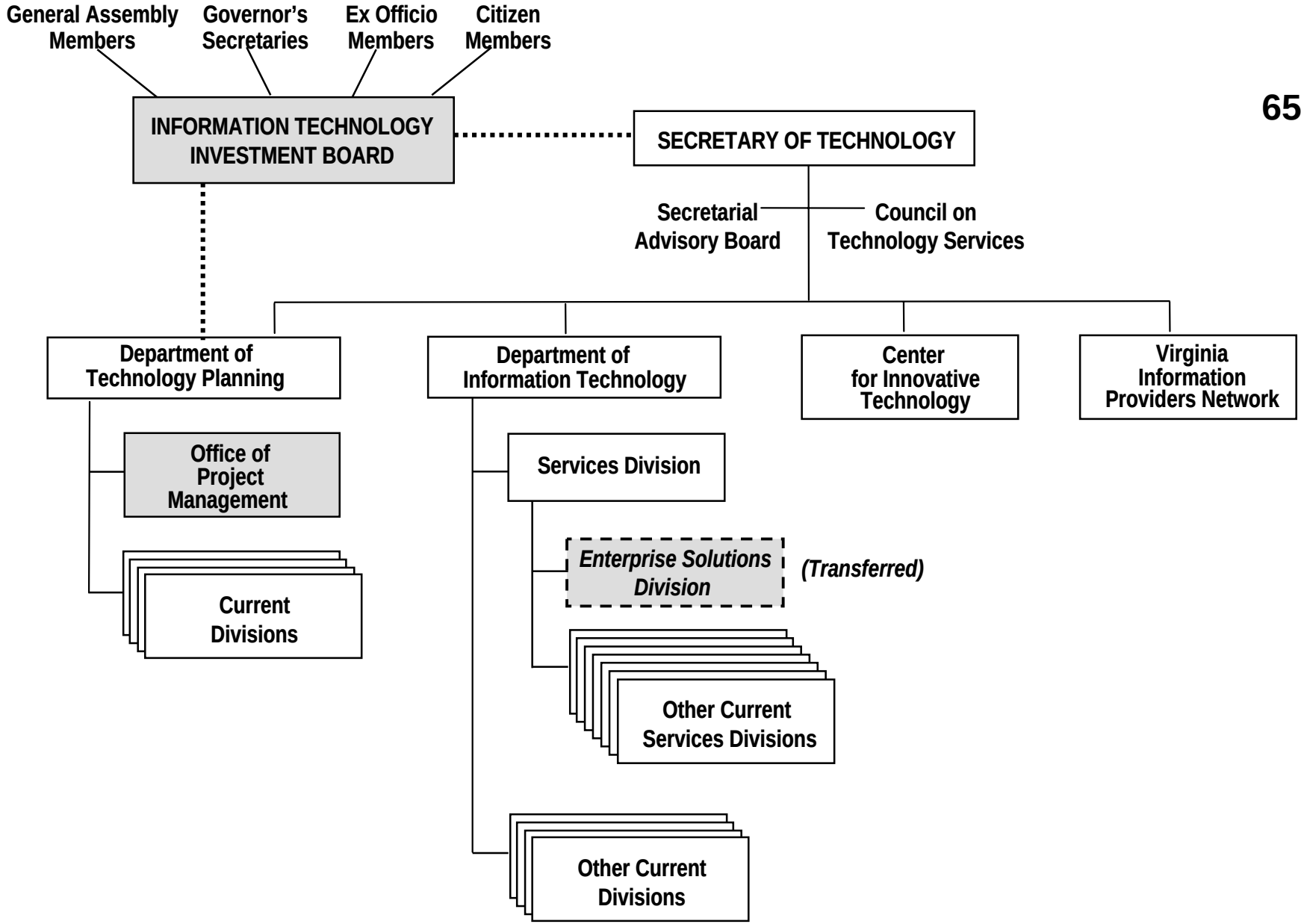
Office of Project Management Would Strengthen Support for IT Development (continued)

- Project management specialists would work closely with agencies and agency project management teams to support them as needed
- Project management specialists could work with agencies to identify situations in which specialized expertise should be retained

Office of Project Management Would Strengthen Support for IT Development (continued)

- **Office of Project Management could also perform the following:**
  - **Direct the development of Statewide enterprise projects**
  - **Develop a formal project management methodology**
  - **Provide cost-effective statewide project management training**
  - **Provide additional resources to agencies including a clearinghouse for the exchange of information regarding prior State development experiences**

Proposed Reorganization of the Technology Secretariat to Support Systems Development



Recommendations

- The report includes recommendations to
  - Establish an Office of Project Management
  - Give the proposed CIO the authority to direct the development of statewide or multi-agency projects
  - Require the proposed CIO and Office of Project Management to provide ongoing assistance and support to agencies in the development of major IT projects
  - Require the proposed CIO to develop a project management methodology
  - Require the Governor and Secretary of Technology to establish a plan for cost-effective training of project managers
  - Require the establishment of an information clearinghouse

Common Architecture Needs to Be Developed

- The state currently lacks common architecture standards in most areas
- Lack of a common State architecture has complicated the ability to develop multi-agency and statewide integrated systems
- Establishment of a common architecture would substantially facilitate the development of such systems

Recommendation

- **The Departments of Technology Planning and Information Technology, at the direction of the Secretary, should collaboratively develop a statewide information technology architecture and related set of systems standards.**

Statewide Planning Should Be Improved

- An effective process for identifying and prioritizing major information systems needs to be established
  - Agencies need to provide input regarding technology solutions to meet agency business needs
  - The Secretary of Technology and the proposed CIO and investment board need to also play a key role in identifying statewide priorities and considering opportunities for coordination and integration of technology solutions among agencies and institutions
- Secretary should develop a biennial strategic plan, approved by the Information Technology Investment Board, that sets forth strategic goals and policy priorities but also specific major systems development priorities

Recommendations

- **The Secretary of Technology, with the assistance of the CIO, should develop a biennial State Strategic Plan for Technology that sets forth State information technology project priorities based on agency technology strategic plans and an analysis of statewide or multi-agency project priorities by the Chief Information Officer.**

- **The General Assembly may wish to consider amending the *Code of Virginia* to require that the proposed Information Technology Investment Board approve the biennial technology strategic plan.**

Proposed Changes Would Improve the Systems Development Process

- Approval and oversight of systems development would be strengthened
- Central support to agencies for systems development would be increased substantially
- Planning for and funding of systems development would be improved
- Process for development of statewide or multi-agency systems would be strengthened

Other States Have Adopted Similar Processes or Practices

- **Several states use investment boards to approve and oversee major IT projects – Arizona, Georgia, Indiana, Iowa, Massachusetts, North Carolina, Texas, Utah, and Washington**
- **Other states have established central funding mechanisms – Iowa, Kentucky, Maryland, Massachusetts, New York, North Carolina, Pennsylvania, and Utah**
- **Several states have established project management offices to provide central support in the development of projects – Georgia, Indiana, Michigan, New York, Ohio, and Texas**

Concepts Proposed Have Been Applied in Virginia Government

- Fairfax county has adopted many of the concepts in the report, including an investment board, a thorough approval process, a central funding mechanism, and project management training requirements

- The public safety secretariat has retained the services of an IT professional who has established a project management training program and provides support to agencies within the secretariat in the development of information systems projects

Proposed Changes Would Not Require Major Reorganization

- Current division of technology management within the Department of Technology Planning could become the Office of Project Management, and existing positions within the division could be refocused on project management

- Only other major organizational changes would be the establishment of an Information Technology Investment Board, and the transfer of the enterprise solutions division from DIT to the Department of Technology Planning

JLARC Model Similar to Some Concepts Identified by Current Secretary

Proposed JLARC Model	***Secretary's Proposed Changes***
Full-time, independent CIO who directs the Department of Technology Planning	**Enhanced CIO focus for the Secretary of Technology**
Approval of all major projects by an Information Technology Investment Board consisting of cabinet secretaries and chaired by the Secretary of Technology	**Approval of funding for enterprise projects by an investment board consisting of cabinet secretaries and chaired by the Secretary of Technology**
Evaluation of all projects by the CIO and Investment Board based on alignment with strategic plan, benefits to the State, identified risks, funding requirements, and proven technical feasibility	**Evaluation of enterprise projects for funding based on alignment with strategic business objectives, appropriate return on investment, solid business case, and proven technical feasibility**
Approval of all requests for proposals and vendor contracts	**Increased oversight of technology procurements**
Secretarial Oversight Committees for all IT projects with an estimated cost of $1 million or more	**Secretarial Oversight Committees for projects that involve procurements of $1 million or more**

JLARC Model Similar to Some Concepts Identified by Current Secretary (continued)

Proposed JLARC Model	***Secretary's Proposed Changes***
Capital planning and funding for enterprise and other major agency systems	**Capital planning and funding for enterprise systems**
Project management specialists within the Department of Technology Planning to provide oversight and support of all projects, and to manage development of enterprise systems projects	**IT Services Director within Department of Information Technology to manage development of enterprise systems**
Information Technology Investment Board consisting of cabinet secretaries to provide ongoing oversight of enterprise systems	**Executive Oversight Committee consisting of deputy secretaries to provide oversight of enterprise systems**
Technology standards for all information systems	**Technology standards for enterprise systems**
Formal project management methodology and formal project management training	**Formal project management methodology**

Conclusion

- With better planning and full development of the business case for major IT projects, the State can better ensure that it is investing in the systems that are most needed and will provide the greatest return for the State

- With an improved project approval and oversight process, and increased project development support to agencies, the State can better ensure the presence of the nine critical elements for project success

Conclusion
(continued)

- With a stronger approval and oversight process, the State can better ensure that only projects with the proper management structure in place move forward; that projects remain within scope, budget and schedule; and that projects are cancelled when appropriate

- With greater central support, there should be substantial savings through improved project management and a decreased need for agencies to retain outside consultants

Conclusion
(continued)

- With a new funding mechanism, the State can more easily finance projects that need to be developed

- The overall result should be improved project management, a higher project success rate, fewer failed development efforts, and a substantial decrease in wasted funds and cost overruns compared to the $75 million spent on failed development efforts and the $28 million in cost overruns identified in the projects reviewed for this report